DATA STRUCTURES FOR EFFICIENT PROCESSING
OF MULTICAST TRANSMISSIONS

ABSTRACT OF THE DISCLOSURE

Data structures, a method, and an associated transmission system for

5   multicast transmission on network processors in order both to minimize

multicast transmission memory requirements and to account for port

performance discrepancies. Frame data for multicast transmission on a

network processor is read into buffers to which are associated various control

structures and a reference frame. The reference frame and the associated

10   control structures permit multicast targets to be serviced without creating

multiple copies of the frame. Furthermore this same reference frame and

control structures allow buffers allocated for each multicast target to be

returned to the free buffer queue without waiting until all multicast

transmissions are complete.